



Fig. 5. Average centroid velocity and track curvature. (A) The centroid velocity averaged over all the worms for a given drug combination is plotted through all the four iterations. The centroid velocity of a single worm is averaged over the last 120s of the 600-s duration of the worm exposure. (B) Similarly, the track curvature averaged over all the worms for a given drug combination is depicted through the four iterations. Centroid velocity and curvature of worms in control experiments using M9 buffer are also shown. The winning combination was chosen as T3 in the fourth iteration that produced minimal centroid velocity and a larger curvature. Each drug combination is tested on at least three to five different chips. Each chip has three separate chambers with one worm per chamber. Bars are SEM.